

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Canceled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (canceled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 2 and 7-14 in accordance with the following:

1. (currently amended) A data storage device comprising:
a data storage unit storing a plurality of files each having a plurality of attributes;
a rule setup unit storing a ranking rule for ranking the files for each of the attributes;
an assignment unit assigning reduction ranking to each of the files on the basis of
ranking rules associated with the attributes; and
a reduction unit reducing data in each file according to the reduction ranking when a
storage capacity of the data storage unit is insufficient for new data storage, and
wherein said reducing data includes at least one of file deletion, data compaction,
document summarization, and file saving.
2. (currently amended) ~~The data storage device according to claim 1, A data~~
storage device, comprising:
a data storage unit storing a plurality of files each having a plurality of attributes;
a rule setup unit storing a ranking rule for ranking the files for each of the attributes;
an assignment unit assigning reduction ranking to each of the files on the basis of
ranking rules associated with the attributes; and
a reduction unit reducing data in each file according to the reduction ranking when a
storage capacity of the data storage unit is insufficient for new data storage,
wherein the rule setup unit further stores application ranking of each of the ranking rules
associated with the attributes, and the assignment unit applies the ranking rules in the
application ranking order to determine the reduction ranking of the files.
3. (original) The data storage device according to claim 1, wherein the rule setup
unit further stores weight information for each of the attributes, and the assignment unit
calculates the total of the attributes of each file on the basis of the weight information and
determines the reduction ranking of the files on the basis of the total of the attributes.

4. (original) The data storage device according to claim 1, further comprising an edit unit editing information stored in the rule setup unit.

5. (original) The data storage device according to claim 1, further comprising a reduction ranking storage unit storing the reduction ranking of the files, and wherein the assignment unit determines the reduction ranking during an idle time in processing associated with the data storage unit and stores the reduction ranking in the reduction ranking storage unit.

6. (original) The data storage device according to claim 1, wherein the data storage unit includes a buffer area into which data is written temporarily when the storage capacity is insufficient, and the reduction unit reduces data in each file after data has been written into the buffer area.

7. (currently amended) ~~The data storage device according to claim 1, further comprising~~ A data storage device, comprising:

a data storage unit storing a plurality of files each having a plurality of attributes;

a rule setup unit storing a ranking rule for ranking the files for each of the attributes;

an assignment unit assigning reduction ranking to each of the files on the basis of ranking rules associated with the attributes;

a reduction unit reducing data in each file according to the reduction ranking when a storage capacity of the data storage unit is insufficient for new data storage; and

a restoration unit restoring a data-deleted file to the original file, and wherein the data storage unit stores a virtual file containing file information of the original file and link information that points to real data of the data-deleted file and the restoration unit restores the data-deleted file to the original file on the basis of information in the virtual file.

8. (currently amended) ~~The data storage device according to claim 1, further comprising~~ A data storage device, comprising:

a data storage unit storing a plurality of files each having a plurality of attributes;

a rule setup unit storing a ranking rule for ranking the files for each of the attributes;

an assignment unit assigning reduction ranking to each of the files on the basis of ranking rules associated with the attributes;

reduction unit reducing data in each file according to the reduction ranking when a storage capacity of the data storage unit is insufficient for new data storage; and

an algorithm storage unit storing application ranking of a plurality of reduction processing algorithms, and wherein the reduction unit determines a combination of a reduction processing algorithm and a file whose data is to be reduced on the basis of the application ranking of the reduction processing algorithms and the reduction ranking of the files.

9. (currently amended) ~~The data storage device according to claim 1, further comprising~~ A data storage device, comprising:

a data storage unit storing a plurality of files each having a plurality of attributes;
a rule setup unit storing a ranking rule for ranking the files for each of the attributes;
an assignment unit assigning reduction ranking to each of the files on the basis of ranking rules associated with the attributes;

a reduction unit reducing data in each file according to the reduction ranking when a storage capacity of the data storage unit is insufficient for new data storage; and

a data reduction speed storage unit storing data reduction speed for each of a plurality of combinations of a reduction processing algorithm and a file whose data is to be reduced, and wherein the reduction unit calculates a target reduction speed and makes a comparison between the target reduction speed and the data reduction speed stored in the data reduction speed storage unit to determine a combination of a reduction processing algorithm and a file whose data is to be deleted.

10. (currently amended) A computer-readable recording medium recorded with a program for a computer, the program allowing the computer to perform:

assigning reduction ranking to each of a plurality of files on the basis of ranking rules associated with attributes of the respective files; and

reducing data in each of the files according to the reduction ranking when a data storage capacity is insufficient for new data storage, and

wherein said reducing data includes at least one of file deletion, data compaction, document summarization, and file saving.

11. (currently amended) A propagation signal for propagating a program to a computer, the program allowing the computer to perform:

assigning reduction ranking to each of a plurality of files on the basis of ranking rules associated with attributes of the respective files; and

reducing data in each of the files according to the reduction ranking when a data storage capacity is insufficient for new data storage, and

wherein said reducing data includes at least one of file deletion, data compaction, document summarization, and file saving.

12. (currently amended) A data reduction method comprising:
setting up a ranking rule for ranking a plurality of files for each of attributes of the files;
assigning reduction ranking to each of the files on the basis of ranking rules associated with the attributes; and

reducing data in each of the files according to the reduction ranking when a data storage capacity is insufficient for new data storage, and

wherein said reducing data includes at least one of file deletion, data compaction, document summarization, and file saving.

13. (currently amended) A data storage device comprising:
data storage means for storing a plurality of files each having a plurality of attributes;
rule setup means for storing a ranking rule for ranking the files for each of the attributes;
assignment means for assigning reduction ranking to each of the files on the basis of ranking rules associated with the attributes; and

reduction means for reducing data in each file according to the reduction ranking when a storage capacity of the data storage means is insufficient for new data storage, and

wherein said reducing data includes at least one of file deletion, data compaction, document summarization, and file saving.

14. (currently amended) A data storage method, comprising:
ranking stored files using ranking rules that consider plural file attributes;
determining whether data storage capacity will be exceeded when a new file is to be stored;

reducing a storage space needed for a file with the highest rank until the new file can be stored; and

storing the new file, and

wherein said reducing includes at least one of file deletion, data compaction, document summarization, and file saving.